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In The Claims:

Claims 1, 9, 11, 24, 31-32, 34, and 43-44 have been amended. A marked up version of the claims is attached as Exhibit B to this Amendment.

C1
1. (Thrice Amended) In a wireless telecommunications system having a Base Transceiver Station (BTS) and a mobile terminal equipped with an integrated Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

recovering respective navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station;

transmitting the navigational data signals to the GPS-equipped mobile terminal from the reference GPS receiver responsive to said request for approximate navigational information; and

determining, from said transmitted navigational data signals, the approximate location of the GPS-equipped mobile terminal;

wherein the GPS satellite signals comprise one of:

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C1 Standard Positioning Service (SPS) signals received on an L1 frequency, said L1 frequency being centered at about 1575.42 MHz; or

Precise Positioning Service (PPS) signals received on an L2 frequency, said L2 frequency being centered at about 1227.60 MHz.

C2 9. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station (BTS) and a mobile terminal equipped with an integrated Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

recovering respective navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station;

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transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information; and

CZ determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal;

wherein said step of transmitting is performed via one of:

a Cell Broadcast (CB) Short Message Service (SMS) message of the wireless telecommunications system; or

a Broadcast Control Channel (BCCH) of the wireless telecommunications system.

C3 11. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station (BTS) and a mobile terminal equipped with an integrated Global Positioning System (GPS) equipped receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a method for determining the approximate position of the GPS-equipped mobile terminal, said method comprising the steps of:

demodulating signals received from a plurality of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

recovering respective navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

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determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

C3 originating a request for approximate navigational information from the GPS-equipped mobile terminal to the Base Transceiver Station;

transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information;

determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal;

periodically transmitting a Timing Advance parameter from the Base Transceiver Station to the GPS-equipped mobile terminal to dynamically compensate for varying distances between the GPS-equipped mobile terminal and the Base Transceiver Station; and

refining said approximate location of the GPS-equipped mobile terminal using said Timing Advance parameter.

24. (Thrice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

demodulation means for demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless

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telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

signal recovery means for recovering navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

determination means for determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

requesting means for requesting approximate navigational information for the GPS-equipped mobile terminal from the Base Transceiver Station;

transmission means for transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information; and

determination means for determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal;

wherein the GPS satellite signals comprise one of:

Standard Positioning Service (SPS) signals received on an L1 frequency, said L1 frequency being centered at about 1575.42 MHz; or

Precise Positioning Service (PPS) signals received on an L2 frequency, said L2 frequency being centered at about 1227.60 MHz.

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31. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

demodulation means for demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

signal recovery means for recovering navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

determination means for determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

determining means for determining whether a GPS signal strength at the GPS-equipped mobile terminal is adequate to permit initialization of the reference GPS receiver associated with the GPS-equipped mobile terminal within a desired response time;

requesting means for requesting approximate navigational information for the GPS-equipped mobile terminal from the Base Transceiver Station, if said GPS signal strength is not adequate to permit said initialization;

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transmission means for transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information; and

determination means for determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal.

CS 32. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

demodulation means for demodulating signals received from a plurality of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

signal recovery means for recovering navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

determination means for determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

requesting means for requesting approximate navigational information for the GPS-equipped mobile terminal from the Base Transceiver Station;

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CS transmission means for transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information; and

determination means for determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal;

wherein said transmission means comprises one of:

a Cell Broadcast (CB) Short Message Service (SMS) message over the wireless telecommunications system; or

a Broadcast Control Channel (BCCH) of the wireless telecommunications system.

34. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

CLP demodulation means for demodulating signals received from a multiplicity of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

signal recovery means for recovering navigational data signals from each of said demodulated GPS satellite signals at the reference GPS receiver;

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determination means for determining, from said transmitted navigational data signals, an estimated location of the reference GPS receiver;

CLP requesting means for requesting approximate navigational information for the GPS-equipped mobile terminal from the Base Transceiver Station;

transmission means for transmitting the estimated location of the reference GPS receiver to the GPS-equipped mobile terminal responsive to said request for approximate navigational information;

determination means for determining, from the estimated location of the reference GPS receiver, the approximate location of the GPS-equipped mobile terminal;

means for periodically transmitting a Timing Advance parameter from the Base Transceiver Station to the GPS-equipped mobile terminal to dynamically compensate for varying distances between the GPS-equipped mobile terminal and the Base Transceiver Station; and

means for refining said approximate location of the GPS-equipped mobile terminal using said Timing Advance parameter.

CLP 43. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

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a demodulator for demodulating signals received from a plurality of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;

computing means for determining an estimated location of said reference GPS receiver using said demodulated signals from said GPS satellites;

determining means for determining whether a GPS signal strength at the GPS-equipped mobile terminal is adequate to permit initialization of the reference GPS receiver associated with the GPS-equipped mobile terminal within a desired response time;

requesting means for requesting approximate locational information from the GPS-equipped mobile terminal to the Base Transceiver Station, if said GPS signal strength is not adequate to permit said initialization;

a transmitter for transmitting the estimated location of said reference GPS receiver from the Base Transceiver Station to the GPS-equipped mobile terminal responsive to said request for said approximate locational information; and

determination means for determining the approximate location of the GPS-equipped mobile terminal using said transmitted location of said reference GPS receiver.

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44. (Twice Amended) In a wireless telecommunications system having a Base Transceiver Station and a mobile terminal equipped with an integrated Global Positioning System (GPS) receiver, the Base Transceiver Station having operational control of the GPS-equipped mobile terminal, a system for determining the approximate position of the GPS-equipped mobile terminal, said system comprising:

- a demodulator for demodulating signals received from a plurality of GPS satellites at a reference GPS receiver, said reference GPS receiver being connected to the wireless telecommunications system and having a determinate physical location relative to the Base Transceiver Station;
- computing means for determining an estimated location of said reference GPS receiver using said demodulated signals from said GPS satellites;
- requesting means for requesting approximate locational information from the GPS-equipped mobile terminal to the Base Transceiver Station;
- a transmitter for transmitting the estimated location of said reference GPS receiver from the Base Transceiver Station to the GPS-equipped mobile terminal responsive to said request for said approximate locational information; and
- determination means for determining the approximate location of the GPS-equipped mobile terminal using said transmitted location of said reference GPS receiver;

wherein said transmitter transmits over one of:

- a Cell Broadcast (CB) Short Message Service (SMS) message over the wireless telecommunications system; or
- a Broadcast Control Channel (BCCH) of the wireless telecommunications system.